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09/866,145	05/25/2001	Richard Alan Hasse		4449

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EXAMINER

HOEY, BETSEY MORRISON

ART UNIT

PAPER NUMBER

1724

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/866,145

Applicant(s)
Haase

Examiner
Betsey M. Hoey

Art Unit
1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 25, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12, 14, and 15 is/are allowed.
- 6) ☒ Claim(s) 13, 16-18, 23, 24, 28-30, and 32-36 is/are rejected.
- 7) ☒ Claim(s) 19-22, 25-27, 31, 37, and 38 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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1. The original patent, or an affidavit or declaration as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.
2. The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414.
3. The amendment filed with the typed out version of the specification proposes amendments to the double column printed patent that do not comply with 37 CFR 1.121(b), which sets forth the manner of making amendments in reissue applications. The double column format of the printed patent is the correct version, but the typed out version is not required, and because it adds new claims to the double column version, it is not proper. A supplemental paper correctly amending the reissue application is required.
4. Applicant is notified that any subsequent amendment to the specification and/or claims must comply with 37 CFR 1.121(b).
5. Claims 1, 4, 7, 8, 10, 11, 14, 15 and 25 are objected to because of the following informalities: "polyacrylamidee" should be rewritten as "polyacrylamide". Appropriate correction is required.
6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claims 13, 24 and 34-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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applicant regards as the invention. Claim 24 recites the limitation "the polymeric quaternary ammonium compounds", but there is insufficient antecedent basis for this limitation in the claim.

Claims 13 and 34-36 are considered indefinite because it is unclear when the biological sludge is mixed with primary sludge with respect to the other steps of the method.

8. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

9. Claims 16, 23, 30 and 34 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 2, 13 and 14, respectively of prior U.S. Patent No. 5,846,435. This is a double patenting rejection.

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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11. Claims 32 and 33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6 and 7 of U.S. Patent No. 5,846,435.

Although the conflicting claims are not identical, they are not patentably distinct from each other because part of the ratio range of the application claims read on the ratio range of the patented claims.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 17, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wade et al. Wade et al. disclose a method for dewatering sludges comprising adding a high molecular weight polymer and an inorganic conditioner. The inorganic conditioner is preferably an aluminum salt, and the preferred high molecular weight polymer is a polyacrylamide. The sludge treated by the method of Wade et al. can be a digested sludge that has been treated in a biological aerobic digestion stage. The method has the advantage of increased dryness of the dewatered product.

The claims differ from Wade et al. by reciting that the sludge has been digested thermophilically, and that aluminum sulfate is added (claim 17), that the polyacrylamide and aluminum sulfate are added in a specific ratio (claim 28), and that the sludge is mixed with primary sludge (claim 35).

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It is submitted that the sludges which can be treated by the method of Wade et al. include biological digested sludges. Therefore, sludges that have been digested by a thermophilic digestion process, and biological sludges that are mixed with primary sludges, are clearly within the scope of the sludges treated by the method of Wade et al. It would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to have treated sludges that have been digested by a thermophilic digestion process and/or such sludges that are mixed with primary sludges, by the method of Wade et al., in order to effectively condition the sludges for optimal dewatering, absent a sufficient showing of unexpected results. It is also submitted that while Wade et al. does not specifically mention the types of aluminum salts that may be used as an inorganic conditioner, aluminum sulfate is an aluminum salt that is a known dewatering agent. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to have used aluminum sulfate as the aluminum salt in the method of Wade et al., in order to aid in dewatering the sludge, because aluminum sulfate is a known dewatering agent. It is further submitted that one of ordinary skill in the art would have been expected, when practicing the method of Wade et al., to have arrived at the optimal ratio of polyacrylamide to aluminum salt by routine experimentation. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to have used a ratio of polyacrylamide to aluminum salt within the range recited in instant claim 28, in order to optimize dewatering of the sludge being treated.

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14. Claims 18, 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo Sasso et al. (abstract; column 1, lines 20-35; column 2, lines 3-14, 41-43; column 3, lines 11-16; Table I). Lo Sasso et al. disclose a method for dewatering sludges, including digested sludges. The method comprises adding a ferric salt and polymer, such as ferric chloride and polyacrylamide, to the sludge to condition the sludge for dewatering. Although Lo Sasso et al. disclose a preferred method of forming an admixture of ferric chloride and polyacrylamide prior to adding to the sludge, Table I shows examples of adding the ferric chloride to the sludge followed by adding the polyacrylamide, and therefore sequential addition is shown by Lo Sasso et al. The ratio of ferric chloride to polyacrylamide is within the range recited in instant claim 29.

The claims differ from Lo Sasso et al. by reciting that the sludge being treated is biological sludge that has been digested by a thermophilic digestion process (claim 18) and that the biological sludge is mixed with primary sludge (claim 36). It is submitted that Lo Sasso et al. describe waste sludges as including digested sludges, primary sludges, and combinations of sludges. Therefore, sludges that have been digested by a thermophilic digestion process, and biological sludges that are mixed with primary sludges, are clearly within the scope of the sludges treated by the method of Lo Sasso et al. It would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to have treated sludges that have been digested by a thermophilic digestion process and/or such sludges that are mixed with primary sludges, by the method of Lo Sasso et al., in order to effectively condition the sludges for optimal dewatering, absent a sufficient showing of unexpected results.

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15. Claims 1-12, 14 and 15 are allowed.

16. Claim 13 would be allowable if rewritten to overcome the rejection(s) under 35

U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

17. Claims 19-22, 25-27, 31, 37 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-12, 14 and 15 are allowed, and claim 13 would be allowed if rewritten to overcome the 112 rejection, because the prior art of record fails to teach, disclose, or fairly suggest a method for dewatering biological sludges that have been digested by a thermophilic digestion process comprising the combination of adding a polymeric quaternary ammonium compound, aluminum sulfate, and ferric chloride to the biological sludge as a primary component, and adding polyacrylamide to the biological sludge, such that the combination of the primary component and polyacrylamide enhances the dewatering of the sludge. It is submitted that while the individual components have been used in the prior art for enhancing dewatering of waste water or sludge, a method for using the combination of all four specific components for enhancing the dewatering of a thermophilically digested sludge, which is known to be difficult to dewater, is not suggested by the prior art of record.

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Claims 19, 21, 25, 26, 31, 37 and 38 would be allowable if rewritten in independent form including all of the limitations of claim 16, because the prior art of record fails to teach, disclose, or fairly suggest a method for dewatering biological sludges that have been digested by a thermophilic digestion process comprising the combination of adding a polymeric quaternary ammonium compound, polyacrylamide, and aluminum sulfate to the biological sludge to enhance the dewatering of the sludge. It is submitted that while the individual components have been used in the prior art for enhancing dewatering of waste water or sludge, a method for using the combination of all three specific components for enhancing the dewatering of a thermophilically digested sludge, which is known to be difficult to dewater, is not suggested by the prior art of record.

Claims 20 and 27 would be allowable if rewritten in independent form including all of the limitations of claim 16, because the prior art of record fails to teach, disclose, or fairly suggest a method for dewatering biological sludges that have been digested by a thermophilic digestion process comprising the combination of adding a polymeric quaternary ammonium compound, polyacrylamide, and ferric chloride to the biological sludge to enhance the dewatering of the sludge. It is submitted that while the individual components have been used in the prior art for enhancing dewatering of waste water or sludge, a method for using the combination of all three specific components for enhancing the dewatering of a thermophilically digested sludge, which is known to be difficult to dewater, is not suggested by the prior art of record.

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Claim 22 would be allowable if rewritten in independent form including all of the limitations of claim 17, because the prior art of record fails to teach, disclose, or fairly suggest a method for dewatering biological sludges that have been digested by a thermophilic digestion process comprising the combination of adding a aluminum sulfate, polyacrylamide, and ferric chloride to the biological sludge to enhance the dewatering of the sludge. It is submitted that while the individual components have been used in the prior art for enhancing dewatering of waste water or sludge, a method for using the combination of all three specific components for enhancing the dewatering of a thermophilically digested sludge, which is known to be difficult to dewater, is not suggested by the prior art of record.

19. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsey Hoey whose telephone number is (703) 305-3934. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6:00 PM, and on alternate Fridays from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Simmons, can be reached at (703) 308-1972. The fax phone number for official after final faxes for this Group is 703-872-9311 for all other official faxes the number is 703-872-9310, and for unofficial faxes the number is (703) 305-3602. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Betsey M. Hoey
BETSEY MORRISON HOEY
PRIMARY EXAMINER
February 14, 2002